

Case 3359

***Germarostes* Paulian, 1982 and *Haroldostes* Paulian, 1982 (Insecta, Coleoptera, SCARABAEIDAE): proposed conservation**

Henry F. Howden

Canadian Museum of Nature, P.O. Box 3443, Station "D", Ottawa,
ON, K1P 6P4 Canada (e-mail: hhowden@mus-nature.ca)

Abstract. The purpose of this application, under Article 23.9.3 of the Code and Recommendation 23A, is to conserve the generic name *Germarostes* Paulian, 1982 and the subgeneric name *Haroldostes* Paulian, 1982 for a group of New World scarab beetles. Since 1982, Paulian's *Germarostes* or *Haroldostes* (the latter often cited as a subgenus) have been universally used by numerous authors. The names are threatened by the unused senior subjective synonym *Sphaerelytrus* Blanchard, 1841. It is proposed that the names *Germarostes* and *Haroldostes* are conserved by suppression of *Sphaerelytrus*.

Keywords. Nomenclature; taxonomy; SCARABAEIDAE; CERATOCANTHINAE; *Sphaerelytrus*; *Germarostes*; *Haroldostes*; *Sphaerelytrus nigerrimus*; *Germarostes aphodioides*; *Haroldostes rugiceps*; New World; scarab beetles.

1. Blanchard (1841, pl. 10, fig. 10) published a drawing of the new New World genus and species *Sphaerelytrus nigerrimus* Blanchard (publication dates from Sherborn & Griffin, 1934). The description of this species was published by Blanchard (1847, p. 186). Until now, the publication date of the species *Sphaerelytrus nigerrimus* Blanchard has been erroneously listed by all authors as 1846 (the actual publication date of the text of this volume was 1847—see Sherborn & Griffin, 1934). While it has not been explicitly mentioned in the literature as yet, the drawing of *S. nigerrimus* by Blanchard (1841, pl. 10, fig. 10) serves as an indication (Article 12.2.7 of the Code—New genus-group name or a species-group name proposed in association with an illustration) and establishes the publication date of the genus *Sphaerelytrus* as 1841. Lacordaire (1856) suggested that, since Blanchard did not mention any generic characters, the name might be a 'lapsus calami' for *Sphaeromorphus* Germar, 1843, and it has been treated as such by several authors, including Paulian (1982), who mentioned that it might be in 'error?'. The genus *Sphaeromorphus* is now considered a synonym of *Ceratocanthus* White, 1842. The generic nomenclatural changes involved for the New World species were fully discussed by Martinez, (1968) and the placement of most species is given by him in a detailed list. Since the paper by Martinez, several New World species have been described, but until Paulian's (1982) paper, all of these were placed in either *Cloeotus* Germar, 1843 or *Ceratocanthus* White 1842 (or in the junior homonym *Acanthocerus* Macleay, 1819). Both *Cloeotus* and *Ceratocanthus* are still considered valid, but have been redefined for taxa outside the scope of this case. From 1856 to the present, *Sphaerelytrus* has not been used as a valid name.

2. The type species of *Sphaerelytrus* Blanchard, 1841 (*Sphaerelytrus nigerrimus* Blanchard, 1841) is currently considered to be in the subgenus *Haroldostes* Paulian, 1982 (p. 44) (type species by original designation *Acanthocerus rugiceps* Germar, 1843, p. 134). If *Sphaerelytrus* Blanchard is used as a valid name, it would need to replace the subgeneric name *Haroldostes* Paulian, 1982, which is a junior subjective synonym of *Sphaerelytrus* Blanchard, 1841. *Haroldostes* Paulian, 1982 is currently considered by Howden & Gill (2000) a subgenus of *Germarostes* Paulian, 1982 (p. 13) (type species by original designation *Melolontha aphodioides* Illiger, 1800 (p. 109)). Since 1982, Paulian's *Germarostes* or *Haroldostes* have been universally used by numerous authors. If *Sphaerelytrus* is used as a valid name, it would replace *Haroldostes* and, since it would be the oldest name, replace *Germarostes* as the nominotypical name of the entire genus; *Germarostes* would then be reassigned as a subgenus of *Sphaerelytrus*. Currently there are 71 valid names placed in *Germarostes* and a change in generic usage now would cause confusion for a considerable time. Authors who have used *Germarostes* since 1982 are: Ratcliffe (1991, 2002); Howden (1992, 2003); Morón (1994); Poole & Gentili (1996); Morón et al. (1998); Peck & Thomas (1998); Delgado et al. (2000); Howden & Gill (2000, 2005); Harpootlian (2001); Mendoza & Jerez (2001); Navarrete-Heredia (2001); Navarrete-Heredia et al. (2001); Grebennikov et al. (2002); Jameson (2002); Kriska & Young (2003); Morón & Arce (2003); Riley & Wolfe (2003); Smith (2003); Weeks et al. (2003); Grebennikov et al. (2004); Delgado & Márquez (2006); Ocampo & Ballerio (2006). Authors who have used *Haroldostes* since 1982 are: Howden & Gill (2000); Delgado et al. (2000); Ratcliffe (2002); Howden (2003); Grebennikov et al. (2004); Delgado & Márquez (2006); Ocampo & Ballerio (2006). Other papers using the name *Germarostes* (*Haroldostes*) are in press. Although *Sphaerelytrus* has not been used since 1899, Article 23.9.1 cannot be used for an automatic reversal of precedence because the names *Haroldostes* and *Germarostes* have been used in fewer than 25 publications. It is, therefore, proposed that the names *Haroldostes* and *Germarostes* are conserved by suppression of *Sphaerelytrus* in order to maintain current and prevailing usage.

3. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the generic name *Sphaerelytrus* Blanchard, 1841 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Germarostes* Paulian, 1982 (gender: masculine), type species by original designation *Melolontha aphodioides* Illiger, 1800;
 - (b) *Haroldostes* Paulian, 1982 (gender: masculine), type species by original designation *Acanthocerus rugiceps* Germar, 1843;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *aphodioides* Illiger, 1800, as published in the binomen *Melolontha aphodioides* (specific name of the type species of *Germarostes* Paulian, 1982);
 - (b) *rugiceps* Germar, 1843, as published in the binomen *Acanthocerus rugiceps* (specific name of the type species of *Haroldostes* Paulian, 1982);
- (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Sphaerelytrus* Blanchard, 1841, as suppressed in (1) above.

References

- Blanchard, C.É.** 1841. Insectes de l'Amérique Méridionale. Plate 10 in d'Orbigny, A., Blanchard, C.É. & Brullé, A., *Voyage dans l'Amérique Méridionale*, volume 6, part 2. Plates 1–32. Bertrand, Paris; V. Levrault, Strasbourg.
- Blanchard, C.É.** 1847. Insectes de l'Amérique Méridionale. Pp. 1–222 in d'Orbigny, A., Blanchard, C.É. & Brullé, A., *Voyage dans l'Amérique Méridionale*, volume 6, part 2. Bertrand, Paris; V. Levrault, Strasbourg.
- Delgado, L. & Márquez, J.** 2006. Estado del conocimiento y conservación de los Coleópteros Scarabaeoidea (Insecta) del estado de Hidalgo, México. *Acta Zoológica Mexicana*, **22**(2): 57–108.
- Delgado, L., Pérez, A. & Blackaller, J.** 2000. Claves para determinar a los taxones genericos y supragenericos de Scarabaeoidea Latreille, 1802 (Coleoptera) de Mexico. *Folia Entomologica Mexicana*, **110**: 33–87.
- Germar, E.F.** 1843. Ueber die Gruppe der kugelförmigen Trogiden. *Zeitschrift für die Entomologie*, **4**: 109–148.
- Grebennikov, V.V., Ballerio, A., Ocampo, F.C. & Scholtz, C.H.** 2004. Larvae of Ceratocanthidae and Hybosoridae (Coleoptera: Scarabaeoidea): study of morphology, phylogenetic analysis and evidence of paraphyly of Hybosoridae. *Systematic Entomology*, **29**: 524–543.
- Grebennikov, V.V., Ballerio, A. & Scholtz, C.H.** 2002. Larva and pupa of *Cyphopisthes descarpentriesi* Paulian (Coleoptera: Scarabaeoidea: Ceratocanthidae) and their phylogenetic implications. *Australian Journal of Entomology*, **41**(4): 367–374.
- Harpootlian, P.J.** 2001. Scarab beetles (Coleoptera: Scarabaeidae) of South Carolina. *Biota of South Carolina*, **2**: 1–157.
- Howden, H.F.** 1992. First Canadian record of the subfamily Ceratocanthinae (Coleoptera: Scarabaeidae). *Coleopterists Bulletin*, **46**(3): 273.
- Howden, H.F.** 2003. Capítulo 5. Subfamilia Ceratocanthinae. Pp. 114–121 in Morón, M.A. (Ed.), *Atlas de los Escarabajos de México*, Vol. II. Arganía editio, Barcelona.
- Howden, H.F. & Gill, B.D.** 2000. Tribes of New World Ceratocanthinae, with keys to genera and descriptions of new species (Coleoptera: Scarabaeoidea). *Sociobiology*, **35**: 281–329.
- Howden, H.F. & Gill, B.D.** 2005. An unusual new species of *Germarostes* Paulian from Peru (Coleoptera: Scarabaeidae: Ceratocanthinae). *Coleopterists Bulletin*, **59**: 272–274.
- Illiger, K.** Vierzig neue Insekten aus der Hellwigischen Sammlung in Braunschweig. Beschreiben von Karl Illiger im anfange des Februars 1800. Mit einigen Abbildungen. *Archiv für Zoologie und Zootomie*, **1**(2): 103–150.
- Jameson, M.L.** 2002. Ceratocanthidae Martínez 1968, chapter 32 in Arnett, R.H., Thomas, M. C., Skelley, P.E. & Frank, J.H. (Eds.), *American Beetles*. Volume 2. 861 pp. CRC Press, Boca Raton.
- Kriska, N.L. & Young, D.K.** 2003. An annotated checklist of Wisconsin Scarabaeoidea (Coleoptera). *Insecta Mundi*, **16**: 31–48.
- Lacordaire, J.T.** 1856. *Histoire Naturelle des Insectes. Genera des Coléoptères*, vol. 3. 594 pp. Librairie Encyclopédique de Roret, Paris.
- MacLeay, W.S.** 1819. *Hortus Entomologicæ: or Essays on the Annulose Animals*, volume 1, parts 1, 2. 524 pp. S. Bagster, London.
- Martinez, A.** 1968. Insectos nuevos o poco conocidos XIII. Ceratocanthini nom. nov. para Acanthocerini (Coleoptera, Scarabaeidae, Troginae). *Revista de la Sociedad Entomológica Argentina*, **30**: 9–16.
- Mendoza, G. & Jerez, V.** 2001. Coleópteros epígeos asociados a *Peumus boldus* Mol. en la Reserva Nacional Isla Mocha, Chile (Insecta - Coleoptera). *Gayana*, **65**(2): 129–136.
- Morón, M.A.** 1994. Fauna de Coleoptera Lamellicornia en las montañas del noreste de Hidalgo, Mexico. *Acta Zoologica Mexicana* (n.s.), **63**: 7–59.
- Morón, M.A. & Arce, R.** 2003. Description of third instar larva and pupa of *Ceratocanthus relictens* (Bates) (Coleoptera: Scarabaeidae: Ceratocanthinae). *Coleopterists Bulletin*, **57**(3): 245–253.
- Morón, M.A., Deloya, C., Ramirez-Campos, A. & Hernández-Rodríguez, S.** 1998. Fauna de Coleoptera Lamellicornia de la region de Tepic, Nayarit, Mexico. *Acta Zoologica Mexicana* (n.s.), **75**: 73–116.

- Navarrete-Heredia, J.L.** 2001. Beetles associated with *Atta* and *Acromyrmex* ants (Hymenoptera: Formicidae: Attini). *Transactions of the American Entomological Society*, **127**(3): 381–429.
- Navarrete-Heredia, J.L., Delgado, L. & Fierros-López, H.E.** 2001. Coleoptera Scarabaeoidea de Jalisco, México. *Dugesiana*, **8**(1): 37–93.
- Ocampo, F.C. & Ballerio, A.** 2006. Phylogenetic analysis of the scarab family Hybosoridae and monographic revision of the New World subfamily Anaidinae (Coleoptera: Scarabaeoidea). 4. Catalog of the subfamilies Anaidinae, Ceratocanthinae, Hybosorinae, Liparochrinae, and Pachyplectrinae (Scarabaeoidea: Hybosoridae). *Bulletin of the University of Nebraska State Museum*, **19**: 178–209.
- Paulian, R.** 1982. Révision des Cératocanthides (Coleoptera Scarabaeoidea) d'Amérique du Sud. *Mémoires du Muséum National d'Histoire Naturelle, Série A, Zoologie*, **124**: 1–110.
- Peck, S.B. & Thomas, M.C.** 1998. A distributional checklist of the beetles (Coleoptera) of Florida. *Arthropods of Florida and Neighboring Land Areas*, **16**: 1–180.
- Poole, R.W. & Gentili, P.** 1996. *Nomina Insecta Nearctica. A check list of the insects of North America. Volume 1: Coleoptera, Strepsiptera*. 827 pp. Entomological Information Services, Rockville, Maryland.
- Ratcliffe, B.C.** 1991. The scarab beetles of Nebraska. *Bulletin of the University of Nebraska State Museum*, **12**: 1–333.
- Ratcliffe, B.C.** 2002. A checklist of the Scarabaeoidea (Coleoptera) of Panama. *Zootaxa*, **32**: 1–48.
- Riley, E.G. & Wolfe, C.S.** 2003. An annotated checklist of the Scarabaeoidea of Texas (Coleoptera). *Southwestern Entomologist Supplement*, **26**: 1–37.
- Sherborn, C.D. & Griffin, F.J.** 1934. On the dates of publication of the Natural History portions of Alcida d'Orbigny's 'Voyage Amérique Méridionale'. *Annals and Magazine of Natural History*, (10)13: 130–134.
- Smith, A.B.T.** 2003. *Checklist of the Scarabaeoidea of the Nearctic Realm*. Version 3. Electronically published, Lincoln, Nebraska. 74 pp. <http://www-museum.unl.edu/research/entomology/nearctic.htm> (Accessed 25 August 2006).
- Weeks, A.W., Velten, R. & Stouthamer, R.** 2003. Incidence of a new sex-ratio-distorting endosymbiotic bacterium among arthropods. *Proceedings of the Royal Society of London (B)*, **270**: 1857–1865.
- White, A.** 1842. Description of some hemipterous insects of the section Heteroptera. *Transactions of the Entomological Society of London*, **3**: 84–94.

Acknowledgement of receipt of this application was published in BZN **62**: 185.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).